

REMARKS.

“(a) Wind strong from east, sky whitish and stars unsteady, yet the planet is brighter and better defined than I should expect under the circumstances. Measures of position good — those of distance pretty coincident, yet taken with difficulty. Power used, 614; which is the ordinary observing power for this object. Six measures of position taken — extreme difference, $3^{\circ} 4'$. Five measures of distance taken — extreme difference, $1''\cdot45$.

“(b) The satellite seems about as far off as last night, or rather closer, but it is too faint to measure in distance satisfactorily.

“(c) Only three measures of position taken; extreme difference, $1^{\circ} 34'$, and three of distance; extreme difference, $0''\cdot61$. Observation considered good.

“(d) Satellite seen with great difficulty. Two measures only of position taken, differing $2^{\circ} 7'$; and three of distance; extreme difference, $1''\cdot32$.

“(e) Only a single measure of position could be got, and that with the greatest difficulty; much haze existing, and the atmosphere very confused. The satellite could barely be seen at intervals, and measures of distance were impossible.

“Bradstones, Liverpool, 8th Jan. 1857.”

The Occultation of Jupiter on the 2d of January, as observed at Greenwich.

(Condensed from the Report sent by the Astronomer Royal.)

Mr. Main observed with the east equatoreal; Mr. Dunkin, with the north equatoreal; Mr. Ellis, with the 46-inch telescope, power 170; Mr. Criswick, with the telescope formerly belonging to the west equatoreal; and Mr. Lynn, with the altazimuth.

Mr. Glaisher's time observations have been omitted, the telescope used being but small. He remarks, “Nothing particular was observed.”

Greenwich M. Solar Times by	M.			D.	E.	C.	L.
	h	m	s	s	s	s	s
Disapp., 4th Sat. first contact	4	44	4'5	...	...	...	...
Disappearance	4	44	5'5	5'7	5'7	14'2	4'2
3d Sat. first contact	4	51	41'1	...	...	...	...
Disappearance	4	51	43'1	42'9	42'9	44'0	43'1
Jupiter's first contact	4	58	33'5	33'8	33'8	32'8	35'0
Last contact	5	0	9'8	9'1	9'3	8'6	7'0
1st Sat. disappearance	5	1	0'6	1'4	1'4	0'4	1'0
2d Sat. first contact	5	2	13'4	...	...	...	...
Disappearance	5	2	14'2	14'2	13'7	13'2	13'1
Reapp., 4th Sat. reappearance	...	...	...	...	...	...	...
3d Sat. reappearance	5	49	66'1	46'4	...	...	...
Jupiter's first appear.	5	59	17'1	22'8	17'4	18'9	19'0
Last contact	6	0	52'8	51'6	47'1	48'6	46'8
1st Sat. reappearance	6	1	57'6	64'4	...	...	...
2d Sat. reappearance	6	3	44'3	48'1	42'1	...	47'3

Mr. Main adds, that at the disappearance, while the line of contact advanced steadily, it appeared to him to be bent at its extremities more suddenly than corresponded to the curvature of the moon's limb. "Till considerably past the centre, the line of contact ran steadily on, preceded distinctly by a band three or four seconds in breadth considerably brighter than the general surface of the planet. It was in fact so bright as to efface for that space the appearance of the cloud-belts, which I could not trace up to the line of contact." Mr. Main witnessed a reappearance for an instant after its first obliteration of the thin line to which *Jupiter* was finally reduced, and which he felt certain was not a portion of the moon's limb.

Mr. Dunkin remarks, "No distortion of the planet was seen. When *Jupiter* was about one-half occulted, the moon's limb, which covered the planet, and which up to this time remained perfectly black, became slightly illuminated, remaining so till the final disappearance of *Jupiter*, when it also instantly disappeared. The times recorded at the reappearance of all the satellites are probably too late by a few seconds; they were seen instantaneously, but there was evidently in each case a space between the satellite and the bright limb. The time of first reappearance of *Jupiter* was also probably late by two or three seconds, but the time of last contact was accurately observed."

Mr. Ellis remarks, "The reappearances of the fourth and third satellites were not looked for, in consequence of the intervening observations of the moon and stars on the meridian. The reappearances observed were all considered rather uncertain as compared with the disappearances. The reappearance of the first satellite was noticed, but the time observed was so uncertain that it was not recorded."

Mr. Criswick remarks, "The time noted for the occultation of the fourth satellite is doubtful, owing to its faintness. The time for the third is very exact. All the satellites appeared to vanish suddenly, with the exception of the third, which seemed to be about half a second disappearing. None of the satellites could be observed on their reappearing, by reason of the brightness of the moon. At the reappearance of the west limb of *Jupiter* it seemed for an instant, before projecting beyond, to shine through the limb of the moon: beyond this I observed nothing unusual during the occultation."

Mr. Lynn remarks, "The disappearances of the satellites were noticed to be gradual, particularly those of the fourth and third; the times noted are those of final disappearance. In the disappearance of *Jupiter* no distortion of the planet was noticed, nor anything peculiar in the line of contact, which was sharp and well defined. The time of first contact was thought to be a little late."

The observations and notes of the above-named gentlemen will, doubtless, be given with all desirable fulness in the Greenwich volume.